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AUTHOR Hoke, Gordon A.
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ABSTRACT

The basic goal of the "linkage agent" or research utilization agent is to facilitate the use of educational research and development to improve educational practice. This task may be conceptualized by a "system" or a "process" model. Successful work in the field of research utilization must encompass elements of both models. In this context, the following problem areas for linkage agents are discussed: weaknesses in the current theoretical models for change, barriers to change, the need to improve school and classroom environments, the fact that educational innovations require new patterns of behavior in a new social context, feedback mechanisms, the need for support systems, training procedures for linkage agents, and the lack of reward and the rootlessness of research utilization agents. Notwithstanding the latter, educators who have the ability and the desire to act as linkage agents will find themselves directly involved in the most pressing problems of the 1970's. Appended is a paper by Martin Tarcher on the value of research involvement as a teaching technique. (DG)

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LINKING RESEARCH TO PRACTICE:
PERSONAL OBSERVATIONS ON AN OLD THEME

Gordon A. Hoke

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Gordon A. Hoke
University of Illinois
Urbana, Illinois 61801

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Introduction

This paper is a description of my efforts to serve as a linkage agent between the esoteric realm of educational research and development and the mundane world of public schools. The adjectives are deliberately chosen for they underscore the opinion each group seems to hold about the other's pursuits. While many of my past activities have been characteristic of those identified with the problems of school-university articulation, the linkage role may involve other agencies and organizations. In fact, my first sustained effort in this area occurred in the context of a project jointly sponsored by the U. S. Office of Education and the Office of the Superintendent of Public Instruction.[1]

It is important to know that I have never held a job officially labeled "linkage agent." Nor has anyone I have ever met. Ronald Lippitt delivered an address at the 1965 Annual Meeting of the American Orthopsychiatric Association in New York in which he discussed the training of "research utilization agents."[2]

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[1]See "Yesterday and Today: A Case Study of Educational Change in a Small Community," Illinois Plan for Educational Leadership Development, Title III, ESEA, January, 1968.

[2]Ronald Lippitt, "The Use of Social Research to Improve Social Practice," American Journal of Orthopsychiatry, V. 35, No. 4, July, 1965. (A mimeo reprint)

Much of what Lippitt presented has been confirmed in my experiences. Another source I have found to be extremely useful also was prepared at the Institute for Social Research, University of Michigan, where Lippitt operates.

The basic goal of linkage activity is to facilitate the use of knowledge to improve educational practice. Benne and Havelock have described this task as having two dimensions.[3]

> There seem to be two ways to conceptualize utilization. One way is as a system and the other is as a process. A system model of utilization uses concepts such as 'organization,' 'group,' 'person,' 'agent,' 'position,' 'role,' 'channel,' and 'link.' A process model includes such concepts as 'relationship,' 'linkage,' 'transfer,' 'exchange,' 'translation,' 'diffusion,' and 'communication.' (italics in original)

I believe that successful work in the field of research utilization must encompass elements of both models. The following pages represent an attempt to blend knowledge gained from my activities, particularly those of the past ten years, with ideas expressed by Lippitt and his University of Michigan colleagues.

The Weakness of Current Theoretical Models

The research tradition that has produced the greatest number of publications on diffusion of new ideas is rural sociology. Although there are many similarities between this field and educational research and development, fundamental differences do exist. A grave problem for practicing educators is finding valid sources of innovation. The campus laboratories and agricultural experimental stations, for example,

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[3]Ronald Havelock and Kenneth D. Benne, An Exploratory Study of Knowledge Utilization, Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, University of Michigan, Ann Arbor, 1965, p. 4. (Benne is on the staff of Boston University.)

provide controlled conditions for testing generally unavailable to education. Lippitt agrees that "there are some very significant differences" between the problems and process of research utilization in various fields.[4] Unfortunately, these variances are not satisfactorily handled in the theoretical models of change which have appeared in recent years..

Not all innovations go through a series of stages leading from research to implementation. As one illustration, the marshalling of forces behind driver training—i.e., insurance companies, the National Safety Council, financial aid from state departments of education—is unique as well as potent. Special education for the handicapped shows signs of attaining the same status for it has received a great boost from mandatory legislation at the state and federal levels. It is critical to note two distinct features of these illustrations. First, neither is regarded by teachers and administrators as representing an integral part of the regular academic schedule. Second, both are congruent with value systems held by the vast majority of Americans.

The looming presence of new demands with outside support, such as driver training and special education, means that erstwhile linkage agents must deal with school personnel who are already caught up in certain programs of change, programs generally in tune with community values. Often the changes we seek threaten to disturb that relationship. This issue is not receiving its proper recognition in the building of theoretical models. Richard Carlson's reference to modern math is a good

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[4]Lippitt, op. cit., p. 8.

illustration of how researchers view a change in teaching and content as a reasonably "easy" innovation to implement even though practitioners have experienced grave difficulties with it.

> . . . Modern math does not call upon the school system to provide a completely new service or teach a new subject. Modern math is a new way of ordering and teaching a firmly established part of the school program. To adopt modern math a school system generally accepts new textbooks and other instructional material and provides some retraining of teachers.[5]

Yet linkage agents, and all educators interested in altering the current scene, can never lose sight of the fact that schools are one facet of an interrelated social system.

> . . . Many critics focus on one or another aspect of the present system without appearing adequately cognizant of how resistant to change that aspect will be as long as the overall system of which it is a part remains an analogue of the factory or office bureauracy.[6]

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[5]Richard O. Carlson, Adoption of Educational Innovations, The Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon, 1965, pp. 14-15.

It is interesting to note the reactions of a Yale psychologist who spends considerable time in school and community practice. Seymour Sarason adopts a position markedly different from that of Carlson.

> Many teachers are in trouble with the new math. Second, the sources of trouble are many but among the most important are the consequences of how it was introduced to teachers, and the difficulty teachers have in voicing questions, problems, and doubts which they fear will be construed as a lack of intelligence and competence, and the tendency on part of administrators and supervisors to relate to teachers in a way conducive to one-way conversation.

Seymour B. Sarason, "The School Culture and Processes of Change," The Henry H. Brechbill Lectures, University of Maryland, January 10, 1966, p. 16.

[6]Warner Bloomberg, Jr., "Teachers, Social Workers, 'Poor' Students, and Poverty," Patterns for Innovative Practice, School Social Work Conference, La Grange, Illinois, 1967, p. 139.

On one hand, theoretical models must allow for such complexity. On the other hand, as Ward Goodenough observes, our techniques lack sophisticated expertise. Citing the lack of professionalism which appears to mark change efforts, the anthropologist comments:

> Several factors appear to contribute to this failure to profit in practice from the lessons already learned. The present state of knowledge is inadequate; what is known is poorly disseminated; and administrators and development agents are unwilling or unable to undertake the sometimes drastic modifications of their own established attitudes and habits that are required if present knowledge is to be successfully applied.[7]

Barriers to Change

Havelock and Benne define barriers as "the defining and identifying limits of any group or individual and they are the differences between the frame of reference of the sender and the frame of reference of the receiver.[8] (italics in original)

One of the most prominent obstacles in linkage activity is the inability of university personnel to comprehend the vulnerable status of public education. Local control of schools is a deeply engrained belief in all regions of this nation, particularly rural sectors. So long as local control is manifested in a myriad districts functioning in almost complete autonomy with respect to the basic program, this barrier is likely to remain. Conversely, professors of higher education rightly hold academic freedom as a great value. Many citizens, including public school practitioners, regard it as

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[7] Ward H. Goodenough, Cooperation in Change: An Anthropological Approach to Community Development (New York: John Wiley and Sons, Inc, Science Editors, 1966), p. 24.

[8] Havelock and Benne, op. cit., p. 6.

a license to frequently engage in unwise or unethical behavior, and the contemporary scene in the United States reflects the strength of that feeling.

Lippitt writes that adoption of new social practices requires significant changes in the values, attitudes, and skills of the practitioner.[9] True. But this type of personal commitment is a two-way street. Representatives of the source of innovation also should anticipate serious strains on their customary patterns of behavior.

Richard Schmuck's contention that ineffective communication blocks the translation of behavioral science findings into educational practice is too limited. He adds: "One reason frequently given by the administrators for not using research knowledge more completely is that typically it is not directly related to the daily tasks of running the schools."[10] School operations take place amidst a sea of forces. Financial burdens are overpowering both parochial and public schools. Institutions where racial issues are present must be prepared to cope with problems rarely encountered in the past. And in Illinois, there is grave concern among schoolmen about proposed state aid for parochial education. Community problems are spilling over into the educational arena as never before. Anyone from the outside trying to work with the schools should anticipate that he cannot escape the influence of these insistent pressures.

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[9] Lippitt, op. cit., p. 8.

[10] Richard Schmuck, "Social Psychological Factors in Knowledge Utilization," Knowledge Production and Utilization in Educational Administration, ed. by Eidell and Kitchel. Center for the Advanced Study of Educational Administration, University of Oregon, Eugene, Oregon, 1968, p. 144.

Improving Environments

A common criticism of the project approach to changing education focuses on its superficiality, its temporary nature, turn-over in staff, and the like. A recent study of Title III, ESEA, projects in Illinois stressed:

> It is obvious that Title III projects have had little impact on day-to-day programs in the schools. A variety of reasons underscores this weakness, but a crucial omission is the failure to effect structural change. The projects have operated outside the on-going process of public education.[11]

Lippitt cautions that educational innovations require new patterns of behavior in a new social context. Consequently, he continues, "there must be significant features of adaptation in each new adoption."[12] (italics in original) His warning is valuable advice, but appears not to be well understood by either practitioners interested in changing or among those promoting new forms of education.

Too much stress is placed on designing inservice training programs charged with the task of changing the attitudes or behavior of participants. Virtually all projects with which I have been associated were developed on the basis that work must first be done to change people. New strategies are needed that will aid schools in producing improved environments, situations that will evoke different patterns of behavior. One such strategy would include direct and sustained linkage to classrooms—i.e., carefully selected classroom settings functioning under a blanket of

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[11] Denny, Terry, and Hoke, Gordon, Background Paper: Project Management and Development, Workshop for Title III, ESEA, Project Directors, Center for Institutional Research and Curriculum Evaluation (CIRCE), November 17-18, 1969, pp. 8-9.

[12] Lippitt, op. cit., p. 8.

quality control measures. Most change efforts to date have concentrated on key administrators, less often on teachers, almost never on students.[13] Yet it seems that little can be accomplished in terms of institutional modification without increased involvement of students. Unless the classroom situation is markedly improved, an observer can rightfully question whether the commitment of time and resources is justified. Careful appraisal of this dilemma should lead to a closer scrutiny of the requirements for improving education. Professor Harry Broudy raises a pertinent issue.

> One looks in vain for any systematic discussion as to the demands of citizenship, of vocation, of living with some degree of sanity and satisfaction in the kind of world we may have when these children finish school. That pupils will learn more mathematics or biology or whatever else is in the package is the only factor that proponents and evaluators seem to be concerned with.[14]

If direct linkage to classrooms and teachers is to occur, the need for a continuum of talents and services at each step of the particular change model is

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[13]Richard Miller asserts:

> [This] writer believes the literature has not given a balanced picture of the importance of classroom teachers and curriculum specialists as compared with administrators. Without in any way denying the key role of administrators, which can be well documented, one can say that very little research is available on the role of classroom teachers, supervisors, and curriculum specialists in change.

Richard Miller, "Needed Research and Development in the Process of Change," A Multidisciplinary Focus on Educational Change, Bureau of School Service, University of Kentucky, Lexington, Kentucky, V. 38, No. 2, December, 1965, p. 73.

[14]Harry S. Broudy, "Needed: A Unifying Theory of Education," Curriculum Change: Direction and Process, ASCD, March 13-17, 1966, p. 22. An English scholar concurs in the opinion that the new curriculum materials often fail to touch the child in ways that really matter and do not seem to have affected teachers to any marked degree. L. G. W. Sealey, "Looking Back on Leicestershire," ESI Quarterly Report, Spring/Summer, 1966, p. 40.

obvious. Also, the question of "institutional climate" will have to be attacked. A first step might be for innovators to adopt much more of a "hard-nosed" attitude concerning the selection of trial schools. Assessment of these sites will require specific criteria for judging their suitability, and new instruments offer encouragement here.[15] In addition, those charged with responsibility for directing the course of change should visit schools and their surrounding communities.

Administrators are notorious for evading inservice training programs. But their behavior can be shaped and modified by prolonged interaction with linkage agents who have access to a wealth of resources. Careful study and analysis of the contact person's activity is always essential, and it is especially critical to capture nuances of behavior in school settings because so many people there function in role stereotypes. For example, I try very hard to observe and interact with contact people in environments other than their schools. Behavioral patterns, particularly among superintendents, reflect amazing contrasts. Furthermore, when visiting the school, I make a practice of seldom going directly to the office or room of the contact person. If it is my first trip to the area, I tour the corridors, glance at bulletin boards, drop by the teachers' lounge, note the reaction of students in classes, the library, and in the halls; in general trying to grasp the emotional atmosphere of the institution. Nor will I leave without examining the grounds or neighborhood surrounding the building.

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[15]See Dimensions of The Class Activities Questionnaire by Joe M. Steele, Illinois Gifted Program Evaluation, CIRCE, University of Illinois, Urbana, Illinois, October, 1969.

A rule of thumb used to judge the behavior of building principals is his or her response to my presence. If he shuts off all phone calls, ignores teacher and pupil requests, in order to deal with a university visitor, then I assume that he is more interested in appearances than function. This simple test has worked well for me, particularly in trying to evaluate a principal's relationship with faculty and students.

Trial schools should be asked to make a real commitment to the testing of innovations. Those of us interested in improving practice will have to honor that action, often a risky one for practitioners. At the moment, our definition of a "social invention" is poorly developed and we lack adequate procedures for identifying, documenting, and validating new programs. Much work is yet to be done in this realm with first priority, perhaps, going to the improvement of communication between the research and development center and practitioners. This act demands sensitive handling because of the danger of overloading key personnel in the linkage system.

> Utilization chains are beset by two principal kinds of difficulties, the impermeability of barriers and the overloading of resource persons. The extent of each tends to vary inversely with the extent of the other: the simplest chains which involve only a few resource persons and hence few barriers are continuously in danger of overloading, particularly where complex messages requiring many units of information are involved. Complex chains which contain many resource persons in separately defined roles tend to reduce the pressure on any one member, thereby reducing the danger of overloading. However, the addition of each new member means that the information must flow through additional barriers.[16]

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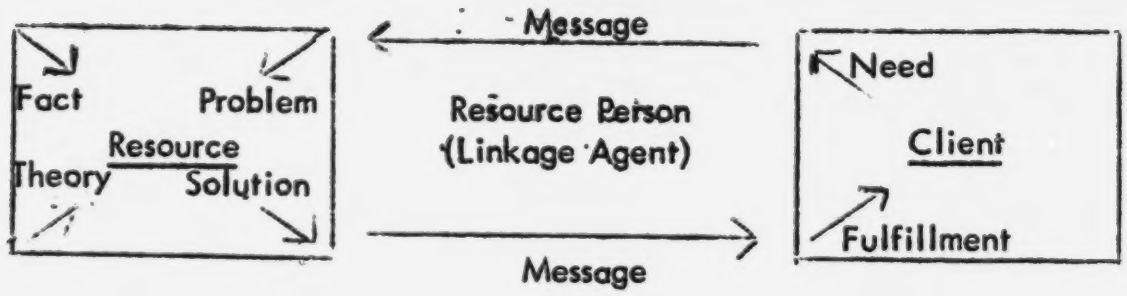
[16] Havelock and Benne, op. cit., p. 12.

I have tried to anticipate both of these difficulties by acting as a direct link between the university base and the public schools. At least two elements seriously test the future efficacy of this routine. One is the sheer weight of physical and intellectual demands. It is compounded by the increased specialization of new projects and the obvious need for new—and younger—personnel. And, in common with all one-man shows, there is little systematic recording of my efforts. One can question, too, whether this style of operation would work in a setting where the linkage agent had fewer professional and personal acquaintances.

Feedback Mechanisms

"Resource people" or linkage agents often become enmeshed in a simple knowledge utilization system of the type noted in diagram number one.

Diagram No. 1



Havelock and Benne describe this need-fulfillment cycle as one in which a client expresses a need to a resource person (linkage agent) who in turn finds the proper resources and arranges for their transmission back to the original client in a form which the latter can use.[17] "Clients," it should be emphasized, might be located in the public school, on the university campus, in the U. S. Office of

[17] Ibid., pp. 6-7.

Education, or in a broad range of settings.

Two glaring deficiencies are reflected in diagram one. Its neglect of the problem of penetrating barriers is a serious fault. Again, Havelock and Benne stress that the goal of utilization

> is not simply to get a given piece of information across from a sender to a receiver, but to change it, transform it, so that it can be recognized and accepted as something of value in a system which views information differently. . . . Utilization means gaining information and ordering it so that it can be put to use to fill needs.[18]

As noted previously, there are strong indications that barriers can become even more impermeable when the "message" involves changes that threaten dearly-held values.

The other limitation in this utilization cycle is its failure to heed the importance of feedback. All parties involved in the need-fulfillment linkage require information to flow in both directions. Jack Frymier regards the failure to make systematic use of corrective feedback as a major weakness of public education.

> The basic point here is that to date very few of the innovations have withstood careful experimental scrutiny and proven, in practice, their superiority to the 'traditional' programs or plans. However, changes have been made and have not been made, regardless of the data available, simply because education as a social system has no systematic way to utilize feedback data effectively and creatively to improve.[19]

Frymier, however, looks mainly at public schools. The formal university structure is especially guilty of ignoring feedback and thus finds itself seriously handicapped in trying to combat cries that it is "cold and impersonal, a cluster of intellec-

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[18] Ibid., p. 19.

[19] Jack Frymier, "Teachers: Not Will but Can They Change?" Strategies for Educational Change, V. 2, No. 6, November, 1968, p. 2.

tual snobs." When the formal system ignores feedback, it will occur informally. And there is no verification mechanism to slow down transmission of messages along personal networks. The primary chains of communication among schoolmen in this state have fashioned a picture of the University of Illinois along the lines described above. Men such as William Sanford, Lowell Fisher, and representatives of the School of Agriculture have built up personal linkage with the field, but it is no accident that this tie is mainly identified with the person, not the institution.

I, too, have relied on a backlog of personal credibility fashioned over the years. A belief that feedback is more than the name implies guides my actions.[20] Connotations of trust, faith, good-will and honesty are inherent in its execution. I always send at least one letter following any contact in the field. Usually an appropriate "message" is included, and this demands thorough knowledge of people's needs, desires, interests. Sheer dissemination of materials produces little change; but whenever relevant items are discovered they are sent to men and women who remain on an informal list of cooperative individuals even though we may no longer be working in a common cause. A basic premise directing this effort is a belief that the higher the level of responsibility, the greater the need for analysis and synthesis of information.

Above all, I write, telephone, stop by on trips, do anything and everything possible to encourage people to feel free to contact me at any time. It is not

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[20]For an excellent illustration of the importance of different varieties of teacher feedback to a curriculum project, see Hulda Grobman's "The Place of Evaluation in a Curriculum Study," Curriculum Development and Evaluation in English and Social Studies, Cooperative Research Project No. F-041, Carnegie Institute of Technology, Pittsburgh, Pennsylvania, 1964, pp. 103-118.

the act of writing, for example, because often I send only a news item or a few lines; no, it is the idea that you are interested in them as individuals, and not solely for the duration of a project.

The Need for Support Systems

The operational base for linkage agents must be assured that it is receiving accurate readings of client needs. All too frequently poor work by linkage personnel submerges R and D centers in a welter of demands for poorly-defined services. Past efforts in this realm are epitomized in remarks by Robert Schafer, Dean of Teachers College, Columbia University.

> The kind of school-university relations which we have ordinarily known in education have been based not upon mutually supportive but upon a unidirectional notion of field service. Many schools of education, responding dutifully, or perhaps at the urging of state legislatures, to the school's immediate and pressing problems such as in-service training, curriculum revision, enumeration of pupil populations, and evaluation of programs, have attempted to provide direct service to the schools. Such a filling-station role requires tremendous resources in faculty and technical staff, as the typical school, not organized for investigation itself, is virtually overwhelmed by problems of the here and now. Even if a university devoted its total energies to servicing schools, it could scarcely hope to meet the insatiable needs of even a few districts in its immediate geographic region. Unfortunately, also, since basic knowledge in many areas is lacking, much so-called educational service consists in reality of providing pseudoauthoritative answers to questions not presently capable of resolution. . . . This kind of so-called professional service can only dissipate the energies of a university faculty.[21]

Admittedly, there is potential danger to the productivity of university staffs in any serious effort to link-up with elementary and secondary schools. But

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[21] Robert J. Schafer, The School As A Center of Inquiry (New York: Harper and Row, Publishers, 1967), pp. 75-76.

Schafer's concern mirrors the oft-repeated theme of a campus base carrying the load. We have not yet begun to develop the networks, procedures, and manpower resources necessary to link basic and applied research over time to day-by-day practice. In part this weakness is intrinsic to the isolated project approach to change. A more substantial factor is the reluctance to conceptualize, to think through, as it were, the demands of taking an innovative idea from conception to implementation. As a consequence, we continue to labor under the handicap of poorly-defined and non-validated procedures cited above while, at the same moment, there is a great volume of creative activities unknown to most workers in the field of educational innovation. To illustrate: Some of the most provocative and informative materials I have discovered in the past three years came from the "fugitive file" of the ERIC Clearinghouse on Early Childhood Education.

So long as school-university liaison relies mainly on individual or project efforts, it will continue to be a professionally hazardous and relatively non-productive undertaking with limited impact on actual practice. Judging my own experience, it is all too obvious that wasted motion abounds, that much of what "I know" is actually a composite of things that have worked for me, and that my efforts, along with those of others engaged in similar endeavors, are part of a pattern of duplication.[22] True, I have tried to establish my own network of people

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[22] An OE official asserts that the same situation exists in the school-community arena.

> On the basis of observations and normative studies, I believe it is fair to say that practices in school-community relations are selected by a fly-by-the-seat-of-the-pants technique, and that such practices are applied to many types of problems affecting school and community relations without any

who can aid with various requests initially relayed to me, but this sequence has all the defects of an individualistic approach to complex issues.

A noted figure in engineering education has stated that the "new" engineering will largely be based on information technology—i.e., the effective manipulation of large quantities of information in a complex society.[23] Data banks of information concerning programs of the past descriptive catalogues of human resources, and listings of new techniques and current efforts surely will represent the core of support systems in the future. The need for liaison agents who can ask the "right" question to unlock these resources and mesh them with carefully analyzed requests is equally certain to intensify. Yet the issue of concept design, of creative social invention, remains paramount.

> . Probably our greatest challenge lies in creative designing of more useful concepts. . . . Unless remarkably vigorous steps are taken to improve our concepts, we run the risk of perverting our growing data processing

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> specific understanding of the reasons why they are the best ones to use. Practices are often employed because other administrators reported success with them. And that 'other administrator' has probably hit upon an approach by following his own Olympian counsel.

Gene C. Fusco, "Implications for School-Community Relations of Psychological Studies in Communication," A Seminar on Communications Research Findings and Their Implications for School-Community Relations Programs, Cooperative Research Project No. G-037, College of Education, Temple University, Philadelphia, 1965, pp. 182-183.

[23]Herbert Hollomon, "Creative Engineering and the Needs of Society," Education for Innovation, ed. by Daniel V. De Simone (London: Pergamon Press, 1968), pp. 23-30.

capacities by feeding into the computers larger and larger arrays of irrelevant, useless, or misleading data.[24]

Training Procedures

Linkage of creative researchers to their colleagues at various points in the flow of information is only one aspect of the task confronting systems of research utilization. Helping the practitioner to clarify his resource needs is also critical. This problem is further compounded by the need to analyze the job demands facing public school personnel. In other words, teachers need and ask for resources that may have little meaning for administrators, and vice-versa. A series of studies examining the Illinois Gifted Program over the past five years affords some valuable insights into this question. In general, these studies stress that:[25]

1) Administrators are better prepared in handling statistical information than instructors.

2) Elementary teachers are more open to change—e.g., inservice training programs based on self assessment techniques.

3) While the need for follow-up services is obvious, neither the visitor to demonstration centers nor the personnel associated with the latter have an adequate grasp of what should constitute such services.

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[24] Bertram M. Gross, "Comment on Simon," Environment and Policy: The Next Fifty Years (Bloomington, Indiana: Indiana University Press, 1968), p. 383.

[25] Among the items deemed most pertinent to this paper are: (1) The Report of the 1968 Summer Institute on Evaluation, CIRCE, University of Illinois, October, 1968, p. 62; (2) Memorandum to Advisory Council on Education of Gifted Children, E. R. House, Project Director, Illinois Gifted Program Evaluation, October 10, 1969, pp. 11, 13; (3) An Examination of Decision Rules Within Organizational Units as Responses to Governmental Stimuli, David A. Erlandson (Unpublished Thesis: College of Education, University of Illinois, 1969), p. 52.

What is required to help practitioners adapt innovative programs to fit local needs? How can linkage agents provide feedback to assist researchers in diagnosing strengths and weaknesses of university-spawned efforts? What kinds of support services will facilitate attempts by other individuals located along the line between campus and classroom

Lippitt emphasizes that the training of research utilization agents requires a grounding both in behavioral science disciplines and in professional values and technology.[26] Many of us faced with the issue of mid-career changes glance back over our past to ask: "Why am I where I am today?" If my current position is that of a legitimate liaison person, and it is so designated on one of the CIRCE proposals, perhaps a brief examination of my training and experience will be of value.

Although the bulk of my studies at the university level focused on the field of professional education, I spent many hours in history, American literature, and sociology classes. History was my favorite subject as a high school student and it was the area in which most of my teaching career took place. At Michigan State University, my major advisor at the masters and doctorate level, a strong man who left a lasting influence on his students, was a PH. D in history and philosophy who moved into teacher training.

However, I have been extremely fortunate in being exposed to exciting, demanding, and personally rewarding work experiences. The first of these was the approximately eighteen years I devoted to athletic training on a part- or full-time

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[26]Lippitt, op. cit., p. 10.

basis. Research scholars in particular are inclined to minimize the comraderie that evolves out of athletics in this country and, in some cases, the common bond coaches and trainers develop with the players. Also, my years in athletics provided two unique advantages. One was the wide array of contacts, many of them lasting friendships, that I built up in Illinois and certain parts of the nation. The second was the diverse opportunities for watching boys and men react to situations testing them in vastly different ways than those normally presented in schools.

I spent five years at Evanston Township High School, Evanston, Illinois when it was headed by a truly creative administrator. Professor McCleary, formerly of the University of Illinois, once labeled Dr. Lloyd Michael as "the last of the Renaissance superintendents." I heartily concur in that evaluation, for ETHS (as it is called by all who have known it) was a great illustration of how a powerful leader can create a type of institutional climate. The teachers and students there were the most stimulating and productive I have ever known.

In 1963 I joined the Illinois Gifted Program as director of a demonstration center in Sterling. During its early years this project was jointly funded by OE and the Office of the Superintendent of Public Instruction, and had, in my opinion, the closest approach to a functioning network of change agents I have encountered. It had a charismatic project director, university-based but with an ability to relate extremely well to public school personnel. Consultants were available on a <u>regular</u> basis, to teach or advise; and three of the four were outstanding. Local teachers were directly involved, both in their work with consultants and curricula and in summer training institutes held at the University of Illinois.

The Gifted Program—in some illogical and wonderful fashion—tapped a cadre of people, many of them viewed as mavericks, almost dysfunctional, in conventional settings, and welded them into a mutually-supportive, statewide alliance of specialized personnel. It should be stressed, though, that this network never was the same after the field consultants disappeared with the phasing out of the initial pilot grant. But all of us learned a singularly important lesson in those years—namely, that one can learn from failure. That "to fail" is only a relative term, and one which suggests that such efforts can always be instructional for self and for others.[27]

In addition, my involvement in the initial crew of demonstration center directors and consultants left me with two other deep convictions. First, it made me a firm believer in the principle of self-selection. I am convinced there is something different—uniquely and significantly different—about the first group to participate in any new program. Events of recent years have strengthened that belief. It is unfortunate that we know so little concerning these people, but I am willing to bet they share a high tolerance level for ambiguity and uncertainty, along with an unusual degree of flexibility. Second, I believe in and act on intuitive feelings. Hunches, first impressions, the way I feel about people and events—these are the forces that guide much of my activity. I trust my perceptions and believe my biggest mistakes occur in situations where I fail to honor them.

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[27] "Although in school one must never fail, an inventor fails all the time, and is elated in those rare instances when he succeeds." Education for Innovation, op. cit., p. 2.

And then, about three years ago, I was given the opportunity to assist in the development and operation of an ERIC Clearinghouse. It was a great learning experience because this job was my first prolonged exposure to the emerging field of information processing, retrieval, and diffusion.

So I have had training in the areas cited by Lippitt. But it is crucial to note, too, that much of this training came in the form of meaningful "practicums." Furthermore, the time element is an important issue here. We cannot and should not anticipate that young men and women of today will spend such a long apprenticeship.[28]

The selection of a training medium is critical. Any organization involved in linkage activities should have a training program functioning inside its operational structure. For beyond the factors stated above, the training mode will have to partially compensate for rewards frequently denied individuals functioning in marginal roles.

Bucking the Reward System

Industry has its own version of the linkage agent. He is the "start-up engineer." These men move from one part of the country to another and across national boundaries as well, literally starting-up new industries. Their usual stay in one place ranges from six to twelve months.

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[28]See Appendix A for an illustration of a training model that appears to hold much promise for college and university students.

Linkage agents in education are somewhat analogous to their industrial counterparts. The former usually have a longer period of specific employment—i.e., project duration of three years as a maximum, but often shorter. Educators who move frequently, however, are viewed as being rather unstable, poor risks for important jobs, especially if these positions offer benefits reserved for individuals performing in the traditional arenas of teaching and research. Conversely, industry's man is given special incentive pay, bonuses for accepting unusual tasks, etc.

The linkage agent really has no "home" on the university campus. His contact persons in the field seem to enjoy and profit from his visits; but they, too, think he is a little daft for "running around the country." And when asked how it feels to be married to "a guy like that," his wife replies: "I have ulcers. Does that answer your question?"

Nevertheless, I thoroughly enjoy the work. Its freedom, spontaneity, diversity, and varying demands are ample rewards. Every job or profession places its own constraints and demands certain trade-offs between it and what might have been. In the final analysis, it is my belief that men and women who have the ability and desire to act as linkage agents will find themselves directly involved in Black/White and other majority-minority group issues in the upcoming decade. And that is where I want to be.

APPENDIX A

A Training Model[1]

"I hope and expect that the institution of the future will have learned that both the best teaching and the best learning occur in the course of research involvement. By research, however, I do not mean opinion surveys, participant observation, or any other technique which limits itself to the accumulation and classification of data—the description of what is. I am referring to scientific method, to laboratory experimentation in which scientists ask questions; select a problem; obtain, analyze, and evaluate data; predict the consequences of data changes; choose a course of action; and use symbolic tools to simulate actual conditions and test the selection made. This is a method not of description, but of change. In this laboratory environment small groups of students with similar educational aims and backgrounds could be apprenticed to small groups of faculty with related but varied specialties. Together, students and faculty would attempt to solve the real problems of real environments, both natural and social—wherever possible linking the two. The students, working as scientists with scientists, would have a voice in the selection of a project. . . .

"This educational approach would not allow the students to go off in all directions. Faculty still has the major responsibility of introducing or directing the students, at the appropriate times, to the <u>essential</u> data and theory from each of the disciplines involved. A theoretical framework must be developed, a framework

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[1] Martin Tarcher, "Leadership: organization and structure," <u>In Search of Leaders</u>, ed. by Kerry Smith, American Association for Higher Education, Washington, D. C., 1967, pp. 266-268.

which expands as new data and theory are introduced. The students work with the theory, use it, link it to what they already know, and apply it to the problems of their community. They relate theory to practice, concentrate on connections, and develop that most important habit of the learning process—the ability to place objects and events in new relationships. In the course of studying and analyzing the community, the student also becomes familiar with such tools for obtaining data as statistical skills. But in learning statistical theory, for example, he will not be dealing with the subject in the abstract. He will apply the theory immediately and directly to obtaining and evaluating data referring specifically to the community under study. Similarly, opinion research techniques might be taught through the designing of an actual survey to be taken in the community.

"In attacking problems through this research method, students get new data; make, discover, learn from, and correct mistakes; bring to light new problems; and disclose gaps in present knowledge. When they achieve their end—draw their conclusions or solve their problem—all this new knowledge becomes part of the means to new ends. In analyzing the meaning of their accomplishment, in going over all they have learned, the students and faculty will think in terms of the next step. 'Where do we go from here? What is the next problem we should attempt to solve? How can our new knowledge be of value in defining and attacking our new problem?' Thus, the group moves from problem to problem, bringing in faculty from other disciplines as needed. The theoretical framework is systematically expanded. And without such a framework, all the facts in the universe will not help the student to understand that universe.

"Learning through research involvement of this type is certainly more exciting than the passive absorption of facts and ideas as disseminated, in lectures or discussion, by teachers anxious to get back to their research. This is not intended to imply that every subject or area of study can or should be taught in this manner. Nor does it mean that the research participants will not attend lectures, take part in discussions, use learning machines, or read books. It does mean that the year's reading, writing, listening, and discussing will be purposive. It will be directed towards the solution of specific problems. It will be preparation for research activity—means to the data and ideas pertinent to the student's project. Finally, such projects are the beginning, not the end of learning. They provide the breadth and scope necessary for the student to become broad-guaged before he becomes a specialist. And when the time arrives for him to select his area of specialization, he will be able to draw upon an experience which involved him in the material and meaning of many disciplines."

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